



## Public Power Council

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Gentlemen,

The Public Power Council is a nonprofit association representing 114 consumer-owned utilities in the Pacific Northwest. We are keenly aware of the effects of the federal hydro system on fish and wildlife resources in the Columbia River basin. Utilities and their consumers realize that we have a responsibility to be part of effort to recover fish and wildlife. We ask only that resources be put to the highest and best use.

We appreciate the efforts on behalf of the federal agencies to consider more cost-effective methods to assure the safe migration of juvenile salmonids from the Snake and Columbia Rivers. We offer these comments on the issue of the summer spill program reduction as proposed by Bonneville Power Administration (BPA) and the U.S. Army Corps of Engineers (Corps) dated June 8, 2004 (June 8 proposal).

**BPA and the Corps must assure that summer spill is the most effective mitigation option for protecting salmon and steelhead in the Columbia River Basin.**

Many documents outline differing goals, concepts and strategies for recovering fish and wildlife in the Columbia River Basin. The fish and wildlife plan of the Northwest Power and Conservation Council identifies yet other ways to mitigate harm to fish and wildlife. Other documents assess the historic status of fish stocks and the impacts of hydroelectric development and operation. Unfortunately, a holistic, prioritized plan for implementation is missing. How, therefore, can the region responsibly assure that the summer spill operation, that provides a minor benefit to so

few fish at such a significant cost, is the one and only, most effective salmon mitigation option available?

We urge the federal executives to work with the states, tribes and other interested and knowledgeable parties to assess the current status of salmon and steelhead populations and the reasons for their decline, and then develop a clear, concise recovery plan for *all* stocks.

This region has spent months arguing over the value of a spill program that affects primarily a non-ESA-listed stock of fall chinook, while ignoring all the other causal factors for the decline of all stocks. The list is well known – over fishing, habitat destruction, urbanization, predation, hydroelectric development, poor hatchery operations and the like.

Yet we allow wasteful and destructive commercial fishing practices. Mixed stock fisheries still kill significant numbers of non-target fish stocks. And harvest levels are set very high. There are miles of suitable, yet unused (owing to high harvest levels), habitat throughout the Columbia River Basin. How do we expect runs to become self-sustaining, and repopulate this habitat, if few fish survive harvest?

Many hatcheries operate in a manner that adversely affects naturally reproducing stocks. Many hatcheries operate solely to provide harvest for fisheries, and their operations adversely affect both ESA-listed and non-target stocks. Many hatchery fish carry diseases that adversely affect their survival. Utilities and their customers should not be compelled to support hatchery programs that adversely affect the same stocks for which they are paying to protect.

Water spilled over dams creates a gas saturation level of 120%. This is much higher than the allowed water quality standard. We are being told that this does not adversely affect outmigrating juvenile salmon and steelhead. Some studies demonstrate little effect on outmigrating juvenile salmonids. But what about chronic effects of gas supersaturation on these fish after they leave the hydro system? What about the effect of gas supersaturation on their forage items found in shallow river areas?

The region is realizing that ocean conditions are a major factor in the success of anadromous stocks. How are varying ocean conditions being considered in this discussion of summer spill?

There are significant populations of non-native predatory fish found throughout the Columbia River Basin. Nothing is being done to control these predators. Indeed, the states are managing and promoting these predatory fish as a valuable recreational resource. Why should utilities and their customers support expensive mitigation

programs when some state governments support programs that directly increase the mortality of the same fish we are trying to recover?

American shad, a non-native, non-predatory species, is returning to the Columbia River in massive numbers. Recent returns have been up to four million adults, and populations are increasing. Juvenile shad are reared in the river along with many native species. What effect does competition from millions of juvenile shad have on native salmon and steelhead stocks?

**The NOAA-Fisheries (NOAA-F) Biological Opinion (BiOp) allows flexibility in actions to meet performance standards for juvenile survival during outmigration through the Federal Columbia River Power System.**

The flexibility provided by NOAA-F in the 2000 BiOp for the federal hydro system is particularly pertinent to the use of spill to pass the only ESA-listed fish – Snake River fall chinook – that are in the river during the summer months of July and August. The latest scientific information shows extremely small biological benefits for the Snake River fall chinook from summer spill.

The BiOp’s strategy is to achieve specified biological performance standards for ESA-listed fish. The BiOp contains 199 actions in what NOAA-F calls the “Reasonable and Prudent Alternative”. In proposing these actions, however, NOAA-F is clear that significant uncertainties and gaps in our knowledge exist that require flexible implementation. In this regard, NOAA-F says

The results from these studies and monitoring should provide better understanding about the status of the ESU’s [*sic*], about which measures work, and about which measures do not work . . . Monitoring and evaluation may lead to revisions in measures the Action Agencies undertake to meet performance standards, or in the performance standards themselves . . .

NOAA-F recognized that it is impossible to prescribe specific actions with the large gaps in our scientific knowledge of what factors actually affect salmon survivals. The flexibility provided in the BiOp for the Action Agencies is to adapt actions based on the best available scientific information. This allows the region to pursue those actions that are both biologically effective and cost-efficient. Section 9.1.6 of the BiOp provides as follows:

An annual, multiyear planning process to refine, implement, evaluate, and adjust ongoing efforts is critical to achieving the FCRPS hydro and offsite performance standards within the time frame covered by this biological opinion.

Specifically, with respect to the hydro system, Section 9.1.2: Hydro Actions, provides that

NMFS may deem other combinations of measures sufficient to meet the performance standards and avoid jeopardy.

In summary, the federal agencies should work to assure that ratepayer dollars are put to the most effective and efficient use. The June 8 proposal to reduce summer spill utilizes the flexibility available to the Corps and BPA. Yet more can be done to achieve a balance between economic issues and natural resource protection.

**We agree, with reservations, with the use of the Simpas model to estimate the effects of the proposed reduction in summer spill.**

We acknowledge that Simpas, a simple spreadsheet model, can be useful to assess the relative difference between various hydro operations. The model is only as accurate as the inputs to the model. The precision of fish passage and survival studies is often more than plus or minus 3%. Often parameters for one input, such as pool mortality, are assumed for those areas where no information is available. Inasmuch as these errors are perpetuated through the model for each input, the actual difference in survival between the spill and non-spill operation is not statistically significant. Thus the reduction in summer spill has no measurable adverse effect on salmon stocks.

**A less than 1% reduction of Lower Columbia River commercial harvest of fall chinook harvest will adequately offset any adverse effect of the summer spill reduction on ESA-listed Snake River fall chinook.**

The non-treaty commercial fishery in the Lower Columbia River provides a minimal economic benefit to the region when compared to the loss of generation through summer spill, and exerts a significant impact on ESA-listed salmon and steelhead. A less than 1% reduction in lower river, non-tribal commercial harvest would more than adequately mitigate adverse effects to ESA-listed Snake River fall chinook salmon. According to non-treaty commercial harvest data from 2003, a 2% total reduction in lower river, non-tribal commercial harvest would result in an additional 160 ESA-listed Snake River fall chinook salmon escaping upriver.

The region will gain a significant recreational and economic benefit by reducing or eliminating the Lower Columbia River non-treaty commercial fishery. A portion of the fish, and concurrent ESA impacts, reassigned from the commercial fishery to the sport fishery would provide approximately double the sport fishing seasons and thereby great economic benefit to fishing communities throughout the region. NOAA-F should reduce or eliminate the impact to ESA-listed salmon and steelhead stocks as a result of the Lower Columbia River non-treaty commercial fishery.

**Increased management of predatory fish species other than northern pikeminnow will provide a significant benefit to juvenile salmon and steelhead outmigrating from the Columbia and Snake Rivers.**

Unfortunately, the Corps and BPA did not include increased management of smallmouth bass, walleye or channel catfish in their offset measures. Significant populations of these predatory fish are found throughout the basin. The Corps and BPA should consider the fact that these are species are not native to the Columbia River Basin. Moreover, these populations exert a significant mortality on both ESA-listed and non-listed salmon and steelhead stocks. While difficult to implement owing to the states' interest in fishing license revenues, increased management should be considered as an efficient and cost-effective option to summer spill.

**Additional or improved artificial production may be a feasible offset measure for summer spill.**

We agree that the proposed production at the Lyons Ferry Hatchery will likely offset adverse effects to Snake River fall chinook. Additional spills or flow augmentation should not be implemented for these fish when they are released from the hatchery. Requiring a special spill program, above and beyond that already planned preseason for 2005, is inconsistent with this spill reduction proposal. Unfortunately, a special spill program for these fish could be viewed as retribution by some.

**Removable Spillway Weir (RSW) technology has promise for significantly benefiting both the salmon and steelhead and the ratepayers.**

The RSW at Lower Granite Dam has demonstrated very high fish passage efficiency, high survival and a more economic river operation than for the spill program outlined in the NOAA-F 2000 BiOp. Preliminary tests on the Bonneville Powerhouse 2 corner collector are showing similar benefits. While installation of additional RSWs do not meet the specific criteria required in the summer spill reduction proposal, we urge the Corps and BPA to evaluate, and, where feasible, implement similar surface bypass technologies.

**There are non-economic benefits to the region to be gained by the proposed reduction in summer spill.**

Reduction of summer spill will lead to a reduction in greenhouse gas emissions. Replacing hydro generation with that from fossil fuel power plants will result in significant additional tons of carbon dioxide released to the environment. Increased reliance would also increase acid deposition from SO<sub>2</sub> and NO<sub>x</sub> emissions. Alternate methods are available for offsetting the effect of reduced summer spill on fish. This

seems a perfect opportunity to help the region economically, minimize net impact to fish, and have positive effects on the environment.

**Adverse effects of the summer spill reduction on outmigrating juvenile salmon are estimated to be so small that they cannot be measured using existing technology.**

The ability to conduct a study to assess effects of a reduced summer spill operation is very limited. Researchers in the region have concluded that system-wide studies are unlikely to provide adequate results in a timely manner using current technology. Recently, Dr. John Skalski, Professor of Biological Statistics at the University of Washington, was asked to identify the number of replicates required to study the system-wide effects on juvenile salmon and steelhead of a single spill configuration at eight federal dams. In a 12/10/03 response to NOAA-F and Idaho Fish & Game, he concluded that this study would require 592 years to complete with adequate precision to identify differences in survival between a single spill versus non-spill operation. Moreover, Dr. Skalski estimated that it would take at least 18 years to assess the system-wide effects of a spill reduction at a single dam. Hence a system-wide evaluation of the effects of a reduced summer spill program is not feasible.

It also is not feasible to conduct a project-specific survival study late in the summer spill season. First, many thousands of test fish are required to evaluate each test condition. There are so few fish outmigrating in August that it would be unlikely that enough could be collected to support a study. Second, project studies are conducted only when it is safe to handle the test fish. State and federal natural resource managers limit the handling of fish when water temperatures exceed 68 degrees Fahrenheit. This temperature threshold is usually exceeded in the Columbia River in late July.

It is, however, feasible to monitor the effects of a reduced summer spill operation on juvenile salmon and steelhead passing each dam. Fish collected and passed downstream through each dam are monitored in laboratories located at each dam. These labs, staffed by state and federal biologists under contract to the Corps, assess the various factors such as the health of fish populations passing the dam. Observations are also made to identify if there are problems with the bypass system. These staffs can monitor the health of fish passing each dam during the modified spill regime. Careful monitoring will give the best indication of whether reduction in summer spill has an adverse effect on juvenile salmon. If significant problems are observed, the spill regime can be further modified to protect fish passing the dam.

**Federal and state governments, tribes and industry must work cooperatively to develop and implement a plan to recover salmon and steelhead stocks in the Columbia River Basin.**

The Regional Dialogue on salmon recovery issues has stalled over a discussion of the effects of an expensive and wasteful spill program for a small number of fish. We urge the regional executives to look at the complete picture. Resources available for salmon recovery are limited. Most of this responsibility is borne by utilities and their consumers. Sadly, it has been much easier to require a spill program at federal dams than to address the myriad problems facing salmon and steelhead.

We appreciate the opportunity to comment

Sincerely,

A handwritten signature in black ink, appearing to read "C. Clark Leone". The signature is fluid and cursive, with a long horizontal stroke at the end.

C. Clark Leone  
Manager

cc: Northwest Congressional Delegation  
Northwest Governors  
NW Power and Conservation Council  
James L. Connaughton, CEQ  
Vice Admiral Conrad C. Lautenbacher, NOAA